

## CLAIMS

I/We claim:

1. A receiver that receives a plurality of inputs indicative of a sensed magnetic flux induced by a marker, said marker excited by an excitation source, said receiver comprising:

a correlation processor for analyzing said plurality of inputs in a coherent manner, said correlation processor acting on said plurality of inputs that are acquired when a radiation source is inactive.

2. The receiver of Claim 1 wherein said radiation source is used in the treatment of a human.

3. The receiver of Claim 1 further including a matched filter that is adapted to detect interference from said radiation source.

4. The receiver of Claim 1 further including a signal line between said radiation source and said receiver that carries a signal indicative of activity of said radiation source.

5. The receiver of Claim 1 wherein said radiation source is a linear accelerator.

6. A method of irradiating a patient with radiation from a radiation source, said radiation targeted by the use of a marker associated into said patient, the method comprising:

applying an excitation to said marker using an excitation source;

using a receiver to receive a plurality of inputs indicative of a sensed magnetic flux induced by said marker in response to said excitation;

using a processor to perform an analysis on said plurality of inputs in a coherent manner to locate said marker; and

synchronizing said radiation source and said processor such that said processor performs said analysis on the received said plurality of inputs that are not subject to interference from said radiation source.

7. The method of Claim 6 wherein said radiation source is used in the treatment of a human.

8. The method of Claim 6 wherein said receiver includes a matched filter that is adapted to detect interference from said radiation source.

9. The method of Claim 6 wherein said receiver includes a signal line between said radiation source and said receiver that carries a signal indicative of activity of said radiation source.

10. The method of Claim 6 wherein said radiation source is a linear accelerator.

11. A method of irradiating a patient with radiation from a radiation source, said radiation targeted by the use of a marker associated into said patient, the method comprising:

applying an excitation to said marker using an excitation source;

using a receiver to receive a plurality of inputs indicative of a sensed magnetic flux induced by said marker in response to said excitation; and

using a processor to perform an analysis on said plurality of inputs in a coherent manner to locate said marker, said plurality of inputs gathered when not subject to interference from said radiation source.

12. The method of Claim 11 wherein said radiation source is used in the treatment of a human.

13. The method of Claim 11 wherein said receiver includes a matched filter that is adapted to detect interference from said radiation source.

14. The method of Claim 11 wherein said receiver includes a signal line between said radiation source and said receiver that carries a signal indicative of activity of said radiation source.

15. The method of Claim 11 wherein said radiation source is a linear accelerator.